

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1-9, 11, 12, and 14-18 are pending in the present application. No claims are added, amended, or canceled by the present response.

In the outstanding Office Action, Claims 1, 9, 11, 12, 16, and 17 were rejected under 35 U.S.C. § 103(a) as unpatentable over Michibayashi et al. (U.S. Patent No. 5,680,190, herein "Michibayashi") in view of Kaneko et al (U.S. Patent No. 5,777,700, herein "Kaneko"), and Claim 8 was rejected under 35 U.S.C. § 103(a) as unpatentable over Michibayashi, Kaneko, and Lee et al. (U.S. Patent No. 6,215,542 B1, herein "Lee").

Applicants thank the Examiner for the courtesy of an interview extended to Applicants' representative on April 26, 2005. During the interview differences between the claims and the applied art were discussed. The Examiner indicated she would further review the claims in view of the discussion of April 26, 2005, and a filed response. Arguments presented during the interview are reiterated below.

Claims 1, 9, 11, 12, 16, and 17 were rejected under 35 U.S.C. § 103(a) as unpatentable over Michibayashi in view of Kaneko. That rejection is respectfully traversed.

Briefly recapitulating, independent Claim 1 is directed to a liquid crystal display device including, *inter alia*, pixel electrodes connected with transistors and opposite electrodes opposite to the pixel electrodes. The pixel electrodes include a first pixel electrode and a second pixel electrode electrically connected, the first pixel electrode applying a first electric field to the liquid crystal, and the second pixel electrode applying a second electric field with a strength different from the first electric field to the liquid crystal. A ratio of a first voltage applied to the liquid crystal by the first pixel electrode and a second voltage

applied to the liquid crystal by the second pixel electrode is 0.5:1.0 to 0.9:1.0. Independent Claims 9, 16, and 17 recite similar features as Claim 1.

The specification discloses at page 30, first full paragraph, that for a thickness of about 400 nm “of the insulating film established **between** the first layer of pixel electrode and second layer of pixel electrode” (emphasis added), “the viewing angle improvement effects are mostly not achieved.” Further, the specification discloses that the thickness of the insulating film is preferable to be at least 500 nm to 600 nm such that a “sufficient viewing angle improvement effects can be attained.” Furthermore, the specification discloses at page 31, lines 1-8, that the 400 nm insulating film shown in Figure 13(a) corresponds to a 0.9:1.0 voltage ratio and “it is preferable that the abovementioned voltage ratio be greater than this.”

Based on the above teachings of the specification, the outstanding Office Action considers that one of ordinary skill in the art would use a 4000 Å (i.e., 400 nm) thick insulation film of Kaneko to modify the device of Michibayashi, which “does not appear to explicitly specify that a ratio of a first voltage applied to the liquid crystal by the first pixel electrode and a second voltage applied to the liquid crystal by the second pixel electrode is 0.5:1.0 to 0.9:1.0,”¹ as required by independent Claims 1, 9, 16, and 17.

However, as discussed during the interview, Kaneko shows in Figure 42B a gate insulation film 98 having a thickness of 4000 Å but the thickness of the gate insulation film 98 **between** first and second pixel electrodes 94 and 96 is only 3500 Å (i.e., 350 nm) because Kaneko discloses at column 17, lines 15-19, that the pixel electrode 96 has a 500 Å thickness. Therefore, Kaneko does not teach or suggest an insulation film between first and second electrodes having a thickness enough to produce the claimed first and second voltage ratio of the first and second pixel electrodes.

¹ Outstanding Office Action, page 4, first full paragraph.

In addition, Applicants respectfully submit that Michibayashi shows in Figure 9 first and second pixel electrode 42an and 42bm electrically connected to each other while Kaneko shows first and second electrodes that appear to not be electrically connected. Thus, it is respectfully submitted that one of ordinary skill in the art would not combine the teachings of Kaneko (which shows first and second pixel electrodes unconnected) with the teachings of Michibayashi (which shows first and second pixel electrodes electrically connected) because such a combination would require a reconstruction or redesign of the first and second pixel electrodes of Michibayashi and would change the basic principle of operation of the device of Michibayashi.²

Accordingly, it is respectfully submitted that independent Claims 1, 9, 16, and 17 and each of the claims depending therefrom patentably distinguish over Michibayashi and Kaneko, either alone or in combination.

Claim 8 was rejected under 35 U.S.C. § 103(a) as unpatentable over Michibayashi, Kaneko, and Lee. That rejection is respectfully traversed.

The outstanding Office Action relies on Lee for teaching a liquid crystal display held between a pixel electrode and a counter electrode. However, Lee does not overcome the deficiencies of Michibayashi and Kaneko discussed above. In addition, Claim 8 depends from independent Claim 1, which is believed to be allowable as noted above.

Accordingly, it is respectfully submitted that dependent Claim 8 is also allowable.

² See In re Ratti, 270 F.2d 810, 813, 123 USPQ 349, 352 (reversing an obviousness rejection where the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate.")

Consequently, in light of the above discussion, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

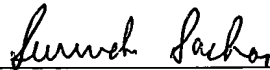
Respectfully submitted,

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